

Claims

- [c1] 1. A dual-band antenna, comprising:
 - a substrate having a first surface and a second surface that is on the opposite side of the substrate from the first surface;
 - a transmission line coupled to a OLE_LINK1 feeding pointOLE_LINK1 for transmitting RF signals;
 - an emitting unit having a first wire and a second wire that are both disposed on the first surface and the first wire and the second wire are crossed at the feeding point; and
 - a ground pad disposed on the second surface of the substrate, wherein the ground pad comprises a base from the base extending toward the feeding point.
- [c2] 2. The dual-band antenna of claim 1 wherein the transmission line is a microstrip.
- [c3] 3. The dual-band antenna of claim 1 wherein the transmission line is a coplanar waveguide.
- [c4] 4. The dual-band antenna of claim 1 wherein the transmission line is a coaxial cable.

- [c5] 5. The dual-band antenna of claim 1 wherein the base of the ground pad is substantially rectangular.
- [c6] 6. The dual-band antenna of claim 1 further comprising an extension disposed on the second surface and extending from the base toward a first edge of the substrate.
- [c7] 7. The dual-band antenna of claim 6 wherein the extension is adjacent to the emitting unit.
- [c8] 8. The dual-band antenna of claim 6 wherein the extension of the ground pad is substantially rectangular in shape.
- [c9] 9. The dual-band antenna of claim 6 wherein combination of the base and the extension forms an "L" shape.
- [c10] 10. The dual-band antenna of claim 1 wherein the first wire decides the low operation frequency of the dual-band antenna.
- [c11] 11. The dual-band antenna of claim 1 wherein the second wire is shorter than the first wire and decides the high operation frequency of the dual-band antenna.
- [c12] 12. The dual-band antenna of claim 1 wherein the second wire is extended upward from the feeding point and bent at some angle, being parallel to one side of the

base.

- [c13] 13. The dual-band antenna of claim 1 wherein the first wire is extended upward from the feeding point and bent at some angle, being parallel to one side of the base.
- [c14] 14. The dual-band antenna of claim 1 wherein the characteristic impedance of the transmission line is 50 Ohms.